



BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Footpath in Kannuramma Temple Main Road and Surrounding Areas in Ward No.8 Kodigehalli, Kodigehalli Sub Division.

								Est Cost: =70.0Lakh	
Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Kannuramma Layout								
	1st Cross		1	70.00	0.60	0.40	16.80		
			1	70.00	0.30	0.40	8.40		
	2nd Cross		2	130.00	0.45	0.40	46.80		
			2	65.00	0.60	0.40	31.20		
	3rd Cross		2	120.00	0.60	0.40	57.60		
	4th Cross		2	110.00	0.60	0.40	52.80		
	6th Cross		2	55.00	0.60	0.40	26.40		
	7th Cross		1	55.00	0.60	0.40	13.20		
	8th Cross		2	80.00	0.60	0.40	38.40		
	Near Kannuramma Temple								
	1st Cross Left Side		2	70.00	0.60	0.40	33.60		
	1st Cross Right Side		2	70.00	0.60	0.40	33.60		
	2nd Cross Left Side		2	65.00	0.60	0.40	31.20		
	2nd Cross Right Side		2	65.00	0.60	0.40	31.20		
	3rd Cross Left Side		2	90.00	0.60	0.40	43.20		
	3rd Cross Right Side		2	65.00	0.60	0.40	31.20		
	4th Cross		2	65.00	0.60	0.40	31.20		
	CP Layout								
	3rd Cross CP layout 0-210		2	210.00	0.60	0.45	113.40		
	1st Cross CP layout 0-230		2	235.00	0.60	0.30	84.60		
	cross roads near lottegollahalli mn road								
	bishop sergent school road		1	35.00	0.60	0.30	6.30		
	2nd cross		1	26.00	0.60	0.30	4.68		
	munishamappa layout 2nd c/s		2	30.00	0.60	0.30	10.80		
	3rd cross		2	70.00	0.60	0.30	25.20		
	4th cross		2	80.00	0.60	0.30	28.80		
	cross road after bishop school		2	55.00	0.60	0.40	26.40		
	Over Burden Earth								
			2	300.00	1.50	0.30	270.00		
							1096.98	186.92	205047.50
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab cover	Sqm							
	4th Cross		2	25.00	1.20	--	60.00		
	6th Cross		2	20.00	1.20	--	48.00		
	7th Cross		1	15.00	1.20	--	18.00		
	8th Cross		2	20.00	1.20	--	48.00		
	Near Kannuramma Temple								
	1st Cross Left Side		2	25.00	0.90	--	45.00		
	1st Cross Right Side		2	25.00	0.90	--	45.00		
	CP Layout								
	3rd Cross CP layout 0-210		2	210.00	1.20	--	504.00		
	1st Cross CP layout 0-230		2	230.00	1.20	--	552.00		
							1320.00		
	consider 30% for Existing Slabs						396.00		
	Consider 15% for missing and Damage Slabs						-59.40		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	BS Slab Drain								
	Damaged Drain		2	300.00	1.35	--	810.00		
	cross roads near lottegollahalli mn road		2	60.00	1.35	--	162.00		
	cross road after bishop school		2	30.00	1.35	--	81.00		
	Consider 15% for missing and Damage Slabs						-157.95		
							1231.65	80.56	99221.72
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortar (1:6) including fixing curing etc., Complete. 10cms thick (P.No.25, I.No.5.31.2 of PW, P&IWD SR 2016-17)								
	For BS Slab Drain / Missing	Sqm					336.60		
							336.60	825.74	277944.08
4	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortar (1:6) including fixing curing etc., Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWD SR 2016-17)								
	Maruthinagar 1st Stage	Sqm							
	Consider 15% for missing and Damage Slabs						157.95		
							157.95	665.68	105144.16
5	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWD S.R 2016-17)								
	Road Portion	Cum							
	1st Cross		1	70.00	5.00	0.25	87.50		
	Near Kannuramma Temple UGD								
	1st Cross Left Side		1	70.00	1.50	0.25	26.25		
	1st Cross Right Side		1	70.00	1.50	0.25	26.25		
	2nd Cross Left Side		1	65.00	1.50	0.25	24.38		
	2nd Cross Right Side		1	65.00	1.50	0.25	24.38		
	4th Cross		1	65.00	1.50	0.25	24.38		
	CP Layout								
	3rd Cross CP layout 0-210		1	210.00	6.00	0.25	315.00		
	1st Cross CP layout 0-230		1	5.00	3.00	0.25	3.75		
	cross roads near lottegollahalli mn road								
	2nd cross		1	26.00	4.50	0.25	29.25		
	munishamappa layout 2nd c/s		1	30.00	3.50	0.25	26.25		
	3rd cross		1	70.00	4.00	0.25	70.00		
	4th cross		1	80.00	4.50	0.25	90.00		
	cross road after bishop school		1	55.00	4.50	0.25	61.88		
	Bad reaches		6	1.80	1.50	0.25	4.05		
			5	2.00	1.00	0.25	2.50		
			4	1.80	2.00	0.25	3.60		
			2	4.00	4.50	0.25	9.00		
			13	0.50	5.00	0.25	8.13		
							836.53	148.76	124441.46
6	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWD SR 2016-17)								
	Road Portion	Cum							
	1st Cross		1	70.00	5.00	0.25	87.50		
	Near Kannuramma Temple UGD								
	1st Cross Left Side		1	70.00	1.50	0.25	26.25		
	1st Cross Right Side		1	70.00	1.50	0.25	26.25		
	2nd Cross Left Side		1	65.00	1.50	0.25	24.38		
	2nd Cross Right Side		1	65.00	1.50	0.25	24.38		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	4th Cross		1	65.00	1.50	0.25	24.38		
	CP Layout								
	3rd Cross CP layout 0-210		1	210.00	6.00	0.25	315.00		
	1st Cross CP layout 0-230		1	5.00	3.00	0.25	3.75		
	cross roads near lottegollahalli mn road								
	3rd cross		1	70.00	4.00	0.25	70.00		
	4th cross		1	80.00	4.50	0.25	90.00		
	cross road after bishop school		1	55.00	4.50	0.25	61.88		
	Bad reaches		6	1.80	1.50	0.25	4.05		
			5	2.00	1.00	0.25	2.50		
			4	1.80	2.00	0.25	3.60		
			2	4.00	4.50	0.25	9.00		
			13	0.50	5.00	0.25	8.13		
							781.03	1768.08	1380914.68
	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&I WTD SR 2016-17)								
	Road Portion	Sqm							
	1st Cross		1	70.00	5.00	--	350.00		
	Near Kannuramma Temple UGD								
	1st Cross Left Side		1	70.00	1.50	--	105.00		
	1st Cross Right Side		1	70.00	1.50	--	105.00		
	2nd Cross Left Side		1	65.00	1.50	--	97.50		
	2nd Cross Right Side		1	65.00	1.50	--	97.50		
	4th Cross		1	65.00	1.50	--	97.50		
	CP Layout								
	3rd Cross CP layout 0-210		1	210.00	6.00	--	1260.00		
	1st Cross CP layout 0-230		1	5.00	3.00	--	15.00		
	cross roads near lottegollahalli mn road								
	3rd cross		1	70.00	4.00	--	280.00		
	4th cross		1	80.00	4.50	--	360.00		
	cross road after bishop school		1	55.00	4.50	--	247.50		
	Bad reaches		8	1.80	1.50	--	21.60		
			6	2.00	1.00	--	12.00		
			5	1.80	2.00	--	18.00		
			3	4.00	4.50	--	54.00		
			15	0.50	5.00	--	37.50		
							3158.10	29.68	93732.41
7	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&I WTD SR 2016-17)								
	Road Portion	Sqm							
	1st Cross		1	70.00	5.00	--	350.00		
	2nd Cross		1	130.00	4.80	--	624.00		
			1	65.00	5.00	--	325.00		
	3rd Cross		1	120.00	4.00	--	480.00		
	4th Cross		1	110.00	5.60	--	616.00		
	5th Cross		1	30.00	5.60	--	168.00		
	6th Cross		1	55.00	4.00	--	220.00		
	7th Cross		1	55.00	5.20	--	286.00		
	8th Cross		1	80.00	5.00	--	400.00		
	Near Kannuramma Temple								
	1st Cross Left Side		1	70.00	6.00	--	420.00		
	1st Cross Right Side		1	70.00	5.20	--	364.00		
	2nd Cross Left Side		1	65.00	6.20	--	403.00		
	2nd Cross Right Side		1	65.00	6.00	--	390.00		
	3rd Cross Left Side		1	90.00	5.30	--	477.00		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	3rd Cross Right Side		1	65.00	6.10	--	396.50		
	4th Cross		1	65.00	6.20	--	403.00		
	CP Layout					--	0.00		
	3rd Cross CP layout 0-210		1	210.00	6.50	--	1365.00		
	1st Cross CP layout 0-230		1	235.00	5.50	--	1292.50		
							8980.00		
	Deduct prime coat						-3158.10		
							5821.90	3.18	18513.64
8	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTDR of 2016-17)								
	For Laying DBM	Sqm							
	3rd Cross CP layout 0-210		1	210.00	6.50	--	1365.00		
	For Laying BC	Sqm							
	1st Cross		1	70.00	5.00	--	350.00		
	2nd Cross		1	130.00	4.80	--	624.00		
			1	65.00	5.00	--	325.00		
	3rd Cross		1	120.00	4.00	--	480.00		
	4th Cross		1	110.00	5.60	--	616.00		
	5th Cross		1	30.00	5.60	--	168.00		
	6th Cross		1	55.00	4.00	--	220.00		
	7th Cross		1	55.00	5.20	--	286.00		
	8th Cross		1	80.00	5.00	--	400.00		
	Near Kannuramma Temple								
	1st Cross Left Side		1	70.00	6.00	--	420.00		
	1st Cross Right Side		1	70.00	5.20	--	364.00		
	2nd Cross Left Side		1	65.00	6.20	--	403.00		
	2nd Cross Right Side		1	65.00	6.00	--	390.00		
	3rd Cross Left Side		1	90.00	5.30	--	477.00		
	3rd Cross Right Side		1	65.00	6.10	--	396.50		
	4th Cross		1	65.00	6.20	--	403.00		
	CP Layout								
	3rd Cross CP layout 0-210		1	210.00	6.50	--	1365.00		
	1st Cross CP layout 0-230		1	235.00	5.50	--	1292.50		
	cross roads near lottegollahalli mn road								
	3rd cross		1	70.00	4.00	--	280.00		
	4th cross		1	80.00	4.50	--	360.00		
	cross road after bishop school		1	55.00	4.50	--	247.50		
							11232.50	12.72	142877.40
9	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.163 I.No. 21.17.6 of PW,P&IWTDR S.R 2016-17)								
	For Laying DBM/Profile Correction	Cum							
	3rd Cross CP layout 0-210		1	210.00	6.50	0.05	68.25		
							68.25	7036.28	480226.11

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
12	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggretes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum) ((P.No.177, I.No.22.6.1 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	cross roads near lottegollahalli mn road								
	bishop sergent school road		1	35.00	4.50	0.10	15.75		
	2nd cross		1	26.00	4.50	0.10	11.70		
	munishamappa layout 2nd c/s		1	30.00	3.50	0.10	10.50		
							37.95	6217.96	235971.58
13	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	cross roads near lottegollahalli mn road								
	bishop sergent school road		1	35.00	4.50	--	157.50		
	2nd cross		1	26.00	4.50	--	117.00		
	munishamappa layout 2nd c/s		1	30.00	3.50	--	105.00		
							379.50	95.40	36204.30
14	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	1855.00	0.10	--	371.00		
							371.00	542.72	201349.12
							Total Construction Cost		6742669.788
15	Add cost of Waste Plastic @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	4452.22	27.00	120210.00
	Waste = 394.70 X 141 X 8 / 100 =4452.22								
16							Cost towards Preparation of DPR LS		67427.00
17							Cost towards PMC / Third Party inspection LS		67427.00
							Sub Total		6997733.79
18							Miscellaneous and rounding off		2266.21
							Total		7000000.00

Certificate.

- 1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
- 2 The provisions made in the estimate are necessary and essential.
- 3 The workspot was inspected and work is found to be necessary.
- 4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
10	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted, thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWT D S.R 2016-17)								
	For Laying BC	Cum							
	1st Cross		1	70.00	5.00	0.04	14.00		
	2nd Cross		1	130.00	4.80	0.04	24.96		
			1	65.00	5.00	0.04	13.00		
	3rd Cross		1	120.00	4.00	0.04	19.20		
	4th Cross		1	110.00	5.60	0.04	24.64		
	5th Cross		1	30.00	5.60	0.04	6.72		
	6th Cross		1	55.00	4.00	0.04	8.80		
	7th Cross		1	55.00	5.20	0.04	11.44		
	8th Cross		1	80.00	5.00	0.04	16.00		
	Near Kannuramma Temple								
	1st Cross Left Side		1	70.00	6.00	0.04	16.80		
	1st Cross Right Side		1	70.00	5.20	0.04	14.56		
	2nd Cross Left Side		1	65.00	6.20	0.04	16.12		
	2nd Cross Right Side		1	65.00	6.00	0.04	15.60		
	3rd Cross Left Side		1	90.00	5.30	0.04	19.08		
	3rd Cross Right Side		1	65.00	6.10	0.04	15.86		
	4th Cross		1	65.00	6.20	0.04	16.12		
	CP Layout								
	3rd Cross CP layout 0-210		1	210.00	6.50	0.04	54.60		
	1st Cross CP layout 0-230		1	235.00	5.50	0.04	51.70		
	cross roads near lottegollahalli mn road								
	3rd cross		1	70.00	4.00	0.04	11.20		
	4th cross		1	80.00	4.50	0.04	14.40		
	cross road after bishop school		1	55.00	4.50	0.04	9.90		
							394.70	8013.60	3162967.92
11	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWT D S.R 2016-17)								
	Bed Concrete	Cum							
	cross roads near lottegollahalli mn road								
	2nd cross		1	26.00	4.50	0.15	17.55		
	munishamappa layout 2nd c/s		1	30.00	3.50	0.15	15.75		
							33.30	5348.76	178113.71

KEY MAP – 16. KANNORAMMA TEMPLE MAIN ROAD



KEY MAP – 16. KANNORAMMA TEMPLE

